

August 8, 2008

HYDRO INTERNATIONAL  
JOHN MACKINNON  
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PORTLAND ME 04102

Re: Description: STORMWATER TREATMENT DEVICE  
Manufacturer: HYDRO INTERNATIONAL  
Product Name: Up-Flo™ FILTER  
Model Number(s): FLUIDIZED BED UP-FLOW FILTRATION SYSTEM FOR STORMWATER TREATMENT  
4-FT. DIA. MANHOLE SYSTEMS WITH 1 - 6 FILTER MODULES  
[EACH MODULE SIZED AT MAX. FLOW RATE OF 25 GPM; 15 IN. DIA. MAX.  
INLET/OUTLET PIPES; FOR USE IN NEW AND RETROFIT APPLICATIONS]  
Product File No: 20080324

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters Comm 82 through 84, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. **This approval is valid until the end of August 2013.**

This approval is contingent upon compliance with the following stipulation(s):

- Prior to installation of this product, plans and specifications must be submitted to the department or to an approved agent municipality for review and approval in accordance with s. Comm 82.20 (1) of the Wis. Admin. Code. **Written approval for the plans and specifications shall be obtained prior to installation of the product.**
- The review undertaken by Commerce staff does not include review and/or approval of this submittal as meeting DNR specifications for ch. NR 151.
- This product is approved for the following uses, as specified in Table Comm 82.70-1:
  - Stormwater and clearwater subsurface detention system,
  - Stormwater and clearwater subsurface infiltration system, or
  - Stormwater and clearwater subsurface detention/infiltration system
- Installation-- Installation of this product must be in accordance with the manufacturer's printed installation instructions. A copy of the manufacturer's installation instructions must be given to the property owner, installer and submitted along with other information required by the governing agency for the installation.
- This submittal applies to Up-Flo™ Filters installed in manhole risers/catch basins meeting chs. Comm 82 and 84 and with inlet grates and water tightness in conformance with s. Comm 82.34 (17).
- Inspection and maintenance of this product must be performed at intervals specified by the manufacturer (Up-Flo™ Filter, ver. 1.0, 5/13/2008) or in accordance plan approval or s. Comm 82.21, whichever is more restrictive.

- When this product is installed in a plumbing stormwater or clearwater plan, the installation must be in accordance with the manufacturer's printed Up-Flo™Filter Installation Instructions□ ver. 1, 2008, ch. Comm 82, plan approval under s. Comm 82.20 and product approval stipulations. When there is a conflict between manufacturer's installation instructions and plan approval or product approval stipulations, the plan approval or product approval stipulations will take precedence.
- This product submittal has been reviewed and approved for plumbing treatment standards for subsurface infiltration and irrigation using stormwater as the source, as listed in Table Comm 82.70-1. **Each site-specific installation shall be submitted for review and include acceptable methods, modeling, or analysis to predict efficiency for TSS and oil & grease removal.**
- When this product is installed in other than a Hydro International manhole riser/catch basin, a department-approved precast concrete manhole riser meeting the design criteria for this product, as specified by Hydro International, is required.
- Labeling: This product shall be permanently labeled identifying the manufacturer and model number (Hydro International, Up-Flo™Filter, serial no. and US Patent No.). Labeling occurs either on the heavy duty cover as an affixed metal plate or on each module; the manhole cover has recessed letter noting manufacturer name.
- This manhole riser/catch basin must be designed to withstand the loads to which it will be subjected. All manhole covers terminating above grade must have effective locking devices.
- Filter Media packs: All filter media will be used and maintained as specified by Hydro International applicable to the site-specific parameters—filter sand, perlite, CPZ™ Mix, CPS™ Mix.
- Maximum storage capacity: sump storage-- 0.9 cubic yards; oil storage—50 gallons.  
Maximum flow rates: Per filter module—25 gpm; treatment flow—0.33 cfs; peak siphonic bypass—6.0 cfs.
- When access is required for inspection, cleaning and maintenance, manholes shall be a minimum of 24 inches diameter.
- **Any plumbing plans that include this device(s) and submitted to Commerce shall be accompanied by an acceptable modeling analysis for the specific site where the installation of this device(s) is planned. The submitted calculations, based on site-specific inputs, shall predict the removal efficiencies by concentration and percentage for both TSS and O&G. For particle size distribution, use the EPA-NURP (National Urban Runoff Program ) distribution.**

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Jean M. MacCubbin, CST  
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